

<b>Area ( A )</b>	Square	$A = s^2$	where s = any side of the square
	Rectangle	$A = lw$	where l = length and w = width
	Parallelogram	$A = bh$	where b = base and h = height
	Triangle	$A = \frac{1}{2} bh$	where b = base and h = height
	Circle	$A = \pi r^2$	where $\pi \approx 3.14$ and r = radius
	Trapezoid	$A = \frac{1}{2} h ( b_1 + b_2 )$	
	Sphere	$S = 4\pi r^2$	where S = Surface area

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**SURFACE AREA ( SA )**

cube	$SA = 6s^2$	where s = any side
cylinder (lateral)	$SA = 2\pi rh$	where $\pi \approx 3.14$ , r = radius, h = height

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**PERIMETER ( P )**

Square	$P = 4s$	where s = any side
Rectangle	$P = 2l + 2w$	where l = length and w = width
Triangle	$P = S_1 + S_2 + S_3$	where s = a side
Any shape	$P =$ the sum of all the sides	
Circle (circumference)	$C = \pi d$	where $\pi \approx 3.14$ and d = diameter
OR	$C = 2\pi r$	where r = radius

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**VOLUME ( V )**

Cube	$V = S^3$	where S = any side
Rectangular prism	$V = lwh$	where l = length, w = width, h = height
Pyramid	$V = \frac{1}{3} Bh$	where B = area of base and h = height
Cylinder	$V = \pi r^2 h$	where $\pi \approx 3.14$ , r = radius, h = height
Cone	$V = \frac{1}{3} \pi r^2 h$	where $\pi \approx 3.14$ , r = radius, h = height
Sphere	$V = \frac{4}{3} \pi r^3$	where $\pi \approx 3.14$ and r = radius

**LINEAR FUNCTIONS**

Slope of a line  $m = \frac{y_2 - y_1}{x_2 - x_1}$

Point-Slope equation  $y_2 - y_1 = m ( x_2 - x_1 )$

Slope-Intercept equation  $y = mx + b$       Where m is the slope and b is the y-intercept

**PYTHAGOREAN THEOREM**

$a^2 + b^2 = c^2$       Where a and b are legs, and c is the hypotenuse, of a right triangle.

**CENTRAL TENDENCY**

Mean      ( Sum of numbers ) / N      Where N is the number of numbers

Median      ( Arrange numbers in order )      The median is the middle number.  
If two middle numbers, then find the mean of these two numbers.

Mode      The number that appears the most often.

Range      Subtract the smallest number from the largest number.

**MISCELLANEOUS FORMULAS**

Simple Interest       $I = p r t$       Where I = interest, p = principal, r = rate, and t = time

Distance       $d = r t$       Where d = distance, r = rate, and t = time

Total Price      ( number of units ) x ( price per unit )

Profit       $P = \text{Gross} - \text{Cost}$       Where P = profit and Gross = total amount  
received

**OTHER ALGEBRAIC RULES**

Product rule       $a^n \times a^m = a^{n+m}$       Quotient rule       $\frac{a^n}{a^m} = a^{n-m}$

Power rule       $( a^n )^m = a^{nm}$       Negative exponent       $a^{-n} = \frac{1}{a^n}$